

## Two New Species in the Genus *Philanthus* and a Key to the *politus* Group (Hymenoptera: Philanthidae)<sup>1</sup>

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Bohart and Grissell (1975) arranged the North American *Philanthus* into seven species groups and provided a key for the identification of the species. An undescribed species belonging to their *P. politus* group was contained in a collection of philanthine wasps received for identification in 1980 from F. D. Parker (USDA, Bee Biology and Systematics Laboratory, Utah State University, Logan). Since this new species was difficult to place in their key, a study of the *P. politus* group was undertaken with the objective of preparing a key to accommodate the new species. A consequence of this study was the finding that the holotype of *Philanthus serrulatae* Dunning is a male of the species previously known as *Philanthus siouxensis* Mickel, a member of the *P. politus* group. The species in the *P. pacificus* group to which Bohart and Grissell (1975) had applied the name *P. serrulatae*, nec Dunning, is thus left without a name.

In Part I of this paper *P. siouxensis* is synonymized under *P. serrulatae*, and *Philanthus boharti* new species is described in the *pacificus* group to provide a name for the species previously known as *P. serrulatae*, nec Dunning. In Part II *Philanthus parkeri* new species is described in the *politus* group; the *politus* group is redefined to include *Philanthus ventilabris* Fabricius; and a key to the *politus* group is presented. Abbreviations used for institutional repositories are explained in Acknowledgments.

### PART I. THE IDENTITY OF *PHILANTHUS SERRULATAE* DUNNING AND DESCRIPTION OF A NEW SPECIES IN THE *PHILANTHUS PACIFICUS* GROUP

Strandtmann (1946) treated several taxa in the genus *Philanthus* as subspecies of *Philanthus politus* Say. Bohart and Grissell (1975) synonymized *Philanthus texanus* Banks under *P. politus* and elevated the remainder of Strandtmann's subspecies to species. They placed *P. politus*, *P. psyche* Dunning, *P. siouxensis*, and *P. tarsatus* H. Smith in their *politus* group; and they placed *P. barbiger* Mickel, *P. pacificus* Cresson, *P. pulcher* Dalla Torre, and *P. serrulatae* in their *pacificus* group. The *politus* group has a metapleural lamella (= metanotal lamina of Strandtmann), whereas this structure is lacking in the *pacificus* group. This placement of *P. serrulatae* was in accord with that of Strandtmann (1946 in key, couplet 27) who stated "No metanotal lamina . . ." in characterizing the species.

Four of the specimens to which Strandtmann (1946) referred in his discussion of *P. serrulatae* were studied (OSU). Three of these (10 mi. e. Santa Fe, New Mexico; Lusk, Wyoming; Clear Creek, Colorado) have a metapleural lamella and are males of *Philanthus siouxensis*. The male from Clear Creek, Colorado, bears

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a label "Compared with type *P. serrulatae* D." The fourth specimen (Imperial County, California) is a male without a metapleural lamella and is conspecific with *P. serrulatae*, nec Dunning, as interpreted by Bohart and Grissell (1975). An additional five males, from Imperial County and Los Angeles, California [USNM], that Strandtmann (1946) had referred to *P. serrulatae* were also examined and found to be conspecific with the *P. serrulatae*, nec Dunning, of Bohart and Grissell (1975). It was apparent that Strandtmann had two species before him. The male holotype of *P. serrulatae* was studied and found to be a male of *P. siouxensis* and conspecific with the above males from New Mexico, Wyoming and Colorado.

### ***Philanthus serrulatae* Dunning**

*Philanthus serrulatae* Dunning, 1898:154. Male holotype, Denver, Colorado; ANSP.

*Philanthus siouxensis* Mickel, 1916:406. Female holotype, Harrison, Nebraska; NEB. Bohart and Grissell, 1975:6,7 (in key); Bohart and Menke, 1976:566; Krombein, 1979:1725. **New Synonymy.**

*Philanthus politus serrulatae*, Strandtmann, 1946:83 (in part).

*Philanthus politus siouxensis*, Strandtmann, 1946:91.

*Specimens examined*.—71 ♂, 82 ♀, including the male holotype of *P. serrulatae* and two female paratypes of *P. siouxensis*.

*Distribution*.—From South Dakota and Wyoming south through the Rocky Mountains and high plains to Arizona, New Mexico and Texas. In Mexico it occurs in the states of Chihuahua, Coahuila, Durango, San Luis Potosi, Zacatecas, Aguascalientes and Mexico. From Colorado northward dates of capture are mostly in July, whereas it has been collected from April to October in the southern part of its range.

*Discussion*.—The above synonymy leaves the *P. serrulatae*, nec Dunning, of Bohart and Grissell (1975) without a name. It is a member of the *pacificus* group, as defined by Bohart and Grissell (1975), and is described herewith.

### ***Philanthus boharti* Ferguson, NEW SPECIES**

*Philanthus politus serrulatae*, Strandtmann, 1946:83 (in part).

*Philanthus serrulatae*, Bohart and Grissell, 1975:17; Bohart and Menke, 1976:566; Krombein, 1979:1725.

Bohart and Grissell (1975) keyed, figured and discussed this species under the name *P. serrulatae* (nec Dunning) and both sexes run to *P. serrulatae* in their key.

*Diagnosis*.—Both Sexes: Length 7–9 mm; inner eye margins parallel below the emargination; maximum head width 1.5 times width of face at apex of eye emargination; interocellar distance greater than ocellocular distance; metapleural lamella absent; forewing costa whitish, at least at base; punctures on terga II–III about same size as scutal punctures; pale transverse band on terga IV–V biemarginate anteriorly; pale markings whitish with few tinges of yellow. *Male*: clypeal brushes whitish, separated medially by half the length of a brush; malar space about equal to width of pedicel; upper half of face below midocellus with punctures separated by 1 or 2 puncture diameters and microridges weak or obscure; vertex width at midocellus greater than half the interocular distance at widest part of clypeus; femora usually with a red tinge at juncture of black basal portion and

white apical portion. *Female*: malar space less than half the width of pedicel; area laterad of midocellus sparsely punctured; femora usually black, red and white, or all red.

*Types*.—Holotype ♂: CALIFORNIA, *San Diego Co.*, Borrego Springs, April 26, 1964 (G. & A. Ferguson, CAS). Paratypes: 100 ♂, 87 ♀ from CALIFORNIA, *San Diego Co.*, as follows: 3 ♂, 4 ♀, same data as holotype; 2 ♂, 3 ♀, same as holotype except April 27, April 28, April 29; 1 ♂, 1 ♀, Borrego Springs, III-30-60 (M. Wasbauer); 1 ♀, Borrego Springs, III-31-73 (C. Goodpasture); 3 ♂, Borrego Valley, sweeping alfalfa, III-26-59 (A. A. Grigarick); 59 ♂, 43 ♀, Borrego Valley, IV-11-62, IV-6-64, V-23-64, IV-11-69, IV-9-70, IV-2-73 (R. M. Bohart, C. Goodpasture, E. E. Grissell, J. E. Slansky, M. Wasbauer); 15 ♂, 9 ♀, Borrego Valley, dunes, IV-18-57, IV-20-57 (R. C. Bechtel, R. M. Bohart, J. C. Hall, H. E. Moffitt, E. I. Schlinger); 8 ♂, 9 ♀, Borrego Valley, Coyote Creek, III-26-59, IV-5-63 (R. M. Bohart, A. A. Grigarick, M. E. Irwin, F. D. Parker); 1 ♂, Borrego State Park, III-28-77 (J. Slansky, M. Wasbauer); 1 ♂, Borrego State Park, IV-17/20-69, *Acacia greggi* (R. R. Pinger); 6 ♀, Borrego State Park, IV-17/20-69 (M. S. & J. S. Wasbauer); 7 ♂, 11 ♀, Borego [sic], IV-1-53, IV-25-54, IV-27-54, IV-29-54, IV-24-55, IV-26-55, IV-27-55 (P. D. Hurd, M. Wasbauer). [AZS, UCB, UCD, CAS, CDA, UID, LAM, OSU, USNM, USU].

*Other specimens examined*.—131 ♂, 121 ♀ in addition to the type series. [AZS, UCB, UCD, CAS, CDA, UID, LAM, OSU, USNM, USU].

*Distribution*. Mostly in Lower Sonoran deserts from San Diego and Imperial Counties north to Mono County, California; Clark County, Nevada; Washington County, Utah; and Mohave and Yuma Counties, Arizona. In Mexico, it occurs in northwestern Sonora (El Golfo; Sonoita; 39 mi. n. Puerto Penasco); Baja California Norte (Bahia de los Angeles; Rosarito; Mexicali; San Felipe); and in Baja California Sur (Guerrero Negro) near the border with Baja California Norte.

*Flight period*. Most dates of capture are from March to May with a peak in April. A partial second brood is indicated by several October captures as follows: California: 2 ♀, San Bernardino Co., 25 mi. s. Ivanpah, X-12/13-58 [UCB]; 1 ♀ Imperial Co., 2 mi. s. Palo Verde, X-18-59 [UCB]; 1 ♂, San Diego Co., 13 mi. e. Borrego Springs, X-7-67 [AZS]. It may also be bivoltine in the Baja California peninsula as indicated by a male captured on II-24-74 (Guerrero Negro) [USU] and a female taken on VIII-5-73 (22 mi. s. Rosarito) [LAM]. A male and 2 females were collected at black light near El Golfo, Sonora, Mexico, IV-10-73 [CDA].

*Etymology*.—I am pleased to dedicate this species to Dr. Richard M. Bohart in recognition of his contributions to our knowledge of aculeate Hymenoptera, and especially for his helpful advice and encouragement in behalf of my current studies. Upon calling the *P. serrulatae* synonymy to his attention he suggested that I proceed to publish it.

*Discussion*. Among the small, finely punctured species of *Philanthus* with an anteriorly biemarginate pale band on terga IV–V, *P. boharti* closely resembles *P. psyche* and *P. serrulatae* in the *politus* group, and *P. pacificus* (= *P. arizonae* Dunning) and *P. pulcher* in the *pacificus* group. Since the metapleural lamella is sometimes quite small in *P. psyche* and *P. serrulatae*, the following comments may be helpful in separating the species. The metapleural lamella is almost always pigmented in *P. psyche*, and in these cases recognition of the structure is relatively easy.

The distinct malar space separates males of *boharti* from *pacificus* and *psyche*, but not from *pulcher* and *serrulatae*. In *pulcher* the forewing costa is reddish to brown to the base, and the interocellar distance is no greater than the ocellocular distance. In *serrulatae* the ocellocular distance is greater than the diameter of the midocellus, whereas in *boharti* the ocellocular distance and the midocellus diameter are subequal. In females the interocellar distance and ocellocular distance are subequal in *pulcher* and *serrulatae*, whereas the interocellar distance is always distinctly greater than the ocellocular distance in *boharti*, *pacificus*, and *psyche*. The metapleural lamella separates *psyche* from the other two species.

Bohart and Grissell (1975) discussed the problem of separating females of *boharti* from red-legged females of *pacificus*. The problem is further complicated by the presence of females of *boharti* without reddish markings on the femora (Old Woman Springs, San Bernadino County, California, IV-17-62; UCB). In *boharti* the tergal punctures are somewhat sparser and more irregularly spaced than in *pacificus* (see Bohart and Grissell, 1975, Figs. 25–28). Head measurements show that the eyes of *pacificus* are somewhat more swollen than in *boharti*. The ratio between least vertex width and width of face at the apices of the eye emarginations is the same for both species, but the maximum head width is 1.6 times the facial width in *pacificus* and only 1.5 times the facial width in *boharti*. There is virtually no overlap in the measurements ( $n = 10$ ). In addition, the two species are largely allopatric with *boharti* being a Lower Sonoran species and *pacificus* an Upper Sonoran and Transition zone form.

## PART II. THE *PHILANTHUS POLITUS* GROUP

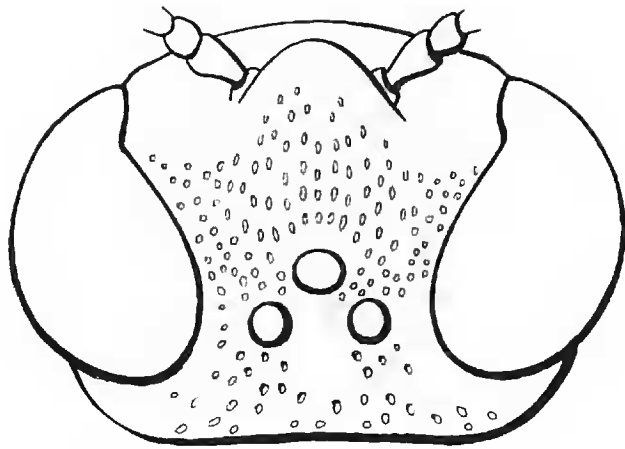
In this section *Philanthus parkeri* new species, belonging to the *politus* group, is described; the *politus* group is redefined to include *Philanthus ventilabris*; and a key to the *politus* group is presented.

### *Philanthus parkeri* Ferguson, NEW SPECIES

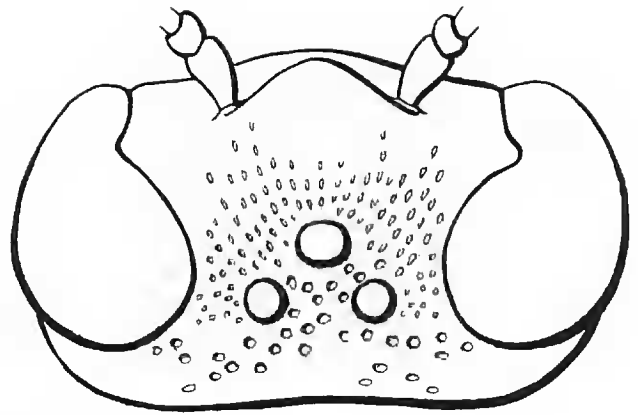
(Figs. 1, 2)

*Male*.—Length 5–7 mm, forewings 4–6 mm; malar space at least  $\frac{3}{4}$  as long as width of pedicel; clypeal brushes whitish, separated medially by half the length of a brush; antennal sockets separated from eye margins by about 2 socket diameters and from each other by about 3 socket diameters; maximum width of head 1.5 times width of face at apex of eye emargination and 2.7 times least width of vertex; face at apex of eye emargination 1.8 times least width of vertex; ocellocular distance about equal to diameter of lateral ocellus and distinctly less than diameter of midocellus; flagellomere I about as long as combined length of scape and pedicel; interantennal groove weak to absent; upper face densely punctured with numerous microridges, sculpture continuing into area between midocellus and eye margin; ocellar triangle with few large, setigerous punctures of about the same size as those behind the ocelli; pubescence of lower face and clypeus bristly, recumbent to sub-recumbent; dense, setigerous punctures of lower face continuing onto adjacent margins of clypeus, remainder of clypeus very sparsely punctate; pronotal ridge thick, rounded; scutal punctures dense antero- and posteromedially, separated and irregular elsewhere, pit-like; scutellum sparsely punctate, groove obscure or absent; metapleural lamella prominent, pigmented; subalar carina variably pigmented, with prominent translucent lamellae laterally; propodeal en-





1



2

Figs. 1, 2. *Philanthus parkeri*, dorsal view of head. 1, male. 2, female. Actual head width 1.9 mm for male and 2.2 mm for female.

closure with large patch of punctures on each side, furrow more densely and irregularly sculptured; many punctures on tergum II smooth-rimmed and larger than scutal punctures; sterna III to V with coarse punctures mostly separated by less than 1 puncture diameter; lateral pubescence on sterna IV and V whitish, not dense; without patches of dense pubescence on sterna VI or VII.

*Female*.—Length 6–8 mm, forewings 5–7 mm; malar space  $\frac{1}{4}$  to  $\frac{1}{5}$  pedicel width; antennal sockets separated from eye margin by about 1.5 socket diameters and from each other by about 2.5 socket diameters; maximum width of head 1.6 times width of face at apex of eye emargination and 2.6 times least width of vertex; ocellocular distance 1.1 times diameter of lateral ocellus and 0.9 times diameter of midocellus; interocellar distance 1.2 times diameter of midocellus; flagellomere I longer than scape; sculpture as in male.

*Coloration*.—Pale markings mostly bright yellow with occasional whitish blotches; males almost entirely yellow in dorsal view, with black band across the ocellar area often present, three narrow black stripes usually indicated on scutum; median black stripe on propodeum usually present; prosternum, mesosternum and metapleural area black; legs mostly yellow except femora basally, trochanters and large spot on coxae black; tarsi yellow to reddish; wings clear hyaline, veins fulvous to reddish; narrow anterior black bands on apical terga; sterna II to V with yellow bands or large spots. Female colored much like male except that black area of vertex extends laterally down inner orbits to antennal sockets, scutum with 3 broad longitudinal black stripes, and more extensively black on propodeum. Tergum VI in female and terga VI and VII in male extensively yellow. Terga IV and V not biemarginate anteriorly.

*Types*.—Holotype ♂: UTAH, *Emery Co.*, 2 mi. n. Goblin Valley State Preserve, 5000 ft., Aug. 25, 1980 (A. S. Menke, F. D. Parker, Kurt A. Menke, USNM). Paratypes: 26 ♂, 67 ♀, all from *Emery Co.*, UTAH, as follows: 5 ♂, 3 ♀, same data as holotype; 8 ♂, 63 ♀, Goblin Valley, in sand dunes, IX-16-79, IX-16-80 (T. Griswold, F. D. Parker, D. Veirs); 13 ♂, 1 ♀, San Rafael Desert, Little Gilson Butte, 5000–5100 ft., VIII-19, 24-27-1980 (A. S. Menke, F. D. Parker, Kurt A. Menke) [UCD, CAS, UID, OSU, USNM, USU].

*Other specimens*.—27 ♂, 6 ♀, as follows: ARIZONA: *Coconino Co.*: 15 mi. n.

The Gap, IX-21-66, 1 ♀ (R. Rust, P. Torchio, G. Wood, N. Yousef, USU). IDAHO: *Butte Co.*: 7 mi. e. Howe, IX-6-67, 12 ♂ (W. F. Barr, UID). *Lincoln Co.*: 5 mi. e. Dietrich, IX-2-65, 1 ♂, 1 ♀ (R. L. Westcott, UID); 7 mi. e. Dietrich, VIII-8-69, 3 ♂ (W. F. Barr, UID). *Owyhee Co.*: Sand Dune Lake, IX-9-63, 1 ♂ (W. F. Barr and G. B. Hewitt, UID). NEBRASKA: *Sioux Co.*: Glen Canyon, VIII-25-59, 2 ♀ (W. E. LaBerge and O. W. Isacson, NEB). NEW MEXICO: *Torrance Co.*: Town of Gran Quivira, 6500 ft., VIII-20-67, 1 ♂ (H. B. Leech, CAS). Duran, VII-13-59, 3 ♂ (E. G. Linsley, UCB). UTAH: Dixie State Park, VI-13-61, 1 ♂ (G. E. Bohart, OSU). *Millard Co.*: Flowell, VIII-20-61, 1 ♀ (G. E. Bohart, OSU). *Juab Co.*: 12 mi. s. Eureka, VII-18-58, 1 ♂ (J. W. MacSwain, UCB). *Washington Co.*: 1 mi. s. Toquerville, IX-5-79, 4 ♂, 1 ♀ (J. C. and E. M. Hall, UCR).

*Variation.*—Most of the major collections in the western United States and several national collections have been searched for additional specimens. Thirty-three specimens were found which I am unable to separate from the type series on morphological grounds, but they differ in coloration. The specimens from outside the type locality are less maculated than the type series. Pale markings are mostly whitish with some pale yellowish blotches. The four pale spots on the scutum tend to form longitudinal stripes, narrow to moderate in width. The mesopleuron and propodeum are pale spotted but not extensively so. The pale bands on terga III to V are biemarginate anteriorly. In the female the pale band on tergum I is interrupted medially, and the band on tergum II tends to enclose black spots laterally. Terga VI and VII are immaculate in the male.

A high degree of intraspecific color variation is well known in *Philanthus* and related genera from western North America, and several other species of *Philanthus* collected in Emery County, Utah, are among the more highly maculated specimens of the respective species. I therefore conclude that the type series and the other specimens are color variants of the same species.

*Distribution.*—From southern Idaho to northern Arizona west of the Rocky Mountains; and western Nebraska and central New Mexico east of the Rocky Mountains.

*Flight period.*—The type series was collected between August 19 and September 16 with August collections composed mostly of males and September collections composed mostly of females. The specimens not included in the type series were collected between August 8 and September 21, with the exception of one male collected in June (Utah) and three males collected in July (New Mexico). The species is apparently univoltine.

*Etymology.*—I am pleased to name this species for Dr. Frank D. Parker who sent me the first specimens collected with the suggestion that they might represent a new species.

*Discussion.*—The *politus* group and the monotypic *ventilabris* group of Bohart and Grissell (1975) have a metapleural lamella which is absent in other North American species groups. Elsewhere in the Philanthidae the metapleural lamella occurs only in the genera *Clypeadon* and *Listropygia* of the subfamily Aphilanthopinae (Bohart and Menke, 1976). The *politus* and *ventilabris* groups also have short, pale clypeal brushes in the males, and the inner margins of the lower eye lobes are parallel in both sexes.

In *P. ventilabris* the transversely grooved pronotal collar and contiguous coarse tergal punctures of both sexes, and the enlarged, flattened apical flagellomere of

the male are autapomorphies, which I do not believe are sufficient in themselves to justify a group separate from the other species having a metapleural lamella.

*Philanthus albopilosus* Cresson was included in the *politus* group by Bohart and Grissell (1975), as it is here, but it too has certain unique characters. The thin head and wide vertex combined with an unusually wide interocellar distance are autapomorphies which serve to isolate the species from all others in the genus. The group relationship is based on the same shared characters mentioned above. In the key I have placed *P. ventilabris* and *P. albopilosus* in separate monotypic subgroups to indicate their more isolated positions.

The *politus* subgroup forms a compact, homogeneous group of five closely allied species. Of these, *P. politus*, *P. serrulatae* (= *P. siouxensis*), and *P. tarsatus* are separated from each other primarily on the basis of body sculpture and color characters, since the ocellocular proportions and head, face and vertex ratios are very similar in the three species.

*P. psyche* and *P. parkeri* n. sp. have a very short ocellocular distance, but they have arrived at this condition by two different routes. In males of *psyche* the maximum width of the head is 1.7 times the width of the face (measured at the apices of the eye emarginations), whereas this ratio is 1.5 in the other four species of the subgroup. The width of the face is 1.4 times the least vertex width in *psyche*—as it is in *politus* and *serrulatae*. This indicates that the higher head/face ratio in *psyche* is due to larger eyes relative to the other two species. The reduced malar space and reduced ocellocular distance in *psyche* have apparently resulted from this enlargement of the eyes.

In males of *parkeri* the head/face ratio is 1.5, as in *politus*, *serrulatae*, and *tarsatus*; but the face/vertex ratio has increased to 1.8 compared to 1.4 in *politus*, *serrulatae* and *psyche*, and 1.5 in *tarsatus*. The vertex has narrowed in *parkeri* with respect to the face, but the eyes have not perceptibly enlarged. The malar space remains, and both the interocellar and ocellocular distances have been reduced.

*P. parkeri* is presumed to be more closely related to *P. tarsatus* than to any other species in the subgroup because of the coarse punctures on the sterna of the two species. The denser sculpture of the upper face and ocellar area of the two species is shared with *P. politus* but not with *P. serrulatae* or *P. psyche*. In addition, the face/vertex ratio of *P. tarsatus* is 1.5, indicating a trend toward a narrowing of the vertex which reaches its culmination in the very narrow vertex of *P. parkeri*.

The narrow vertex and compact ocellocular area of *P. parkeri* are unique within the *politus* group and make it difficult to place in Bohart and Grissell's (1975) key. The following key is modified and adapted from their key to accommodate *P. parkeri*.

KEY TO SPECIES OF THE *PHILANTHUS POLITUS* GROUP

- 1. Pronotal collar thick, shallowly, transversely grooved dorsally; interocellar distance less than ocellocular distance (*ventilabris* subgroup) . . .  
..... *ventilabris* Fabricius
- Pronotal collar rounded, convex; interocellar distance equal to or greater than ocellocular distance . . . . . 2
- 2. Head thin in side view, not swollen behind the eyes; interocellar distance greater than distance from lateral ocellus to posterior margin of head,

- and greater than two lateral ocellus diameters (*albopilosus* subgroup)  
 ..... *albopilosus* Cresson
- Head swollen behind the eyes; interocellar distance about equal to or less than distance from lateral ocellus to posterior margin of head, and not greater than two lateral ocellus diameters (*politus* subgroup) ..... 3
3. Males ..... 4
- Females ..... 8
4. Ocellocular distance about equal to lateral ocellus diameter and slightly less than midocellus diameter ..... 5
- Ocellocular distance distinctly greater than lateral ocellus diameter and at least slightly greater than midocellus diameter ..... 6
5. Malar space less than half the width of antennal pedicel; punctures of tergum II uniformly distributed and about same size as scutal punctures  
 ..... *psyche* Dunning
- Malar space at least  $\frac{3}{4}$  the width of antennal pedicel; punctures of tergum II somewhat unevenly distributed, of uneven size, with numerous punctures smooth-rimmed and larger than scutal punctures .....  
 ..... *parkeri* Ferguson, new species
6. Upper face and area laterad of midocellus sparsely punctate with many large polished areas ..... *serrulatae* Dunning
- Upper face densely punctured, interspersed with many fine ridges, sculpture extending into area laterad of midocellus ..... 7
7. Hypoepimeron with dense, contiguous punctures and many microridges; pale band of tergum I broadly contiguous ..... *tarsatus* H. Smith
- Hypoepimeron polished at least on anterior half, with scattered fine punctures; pale band of tergum I interrupted ..... *politus* Say
8. Ocellocular distance about equal to diameter of midocellus; forewing costa whitish on basal half; conspicuous, recumbent, bristly pubescence on lower face between upper clypeal lobe and eye margin ..... 9
- Ocellocular distance distinctly greater than diameter of midocellus; forewing costa reddish or brown to base; pubescence of lower face fine, not recumbent ..... 10
9. Interocellar distance about twice the diameter of the lateral ocellus; sterna III-V sparsely, shallowly punctate; width of face at apices of eye emarginations 1.4 to 1.5 times least width of vertex ..... *psyche* Dunning
- Interocellar distance much less than twice the diameter of lateral ocellus; sterna III-V coarsely, rather densely punctate; width of face at apices of eye emarginations 1.7 to 1.8 times least width of vertex .....  
 ..... *parkeri* Ferguson, new species
10. Hindtarsi black or heavily infuscated; punctures of mesopleuron, especially hypoepimeron, dense, contiguous, with numerous microridges  
 ..... *tarsatus* H. Smith
- Hindtarsi yellowish to reddish; punctures of mesopleuron well separated by thick, polished ridges and anterior part of hypoepimeron shiny with sparse punctures ..... 11
11. Hindfemora red, or black and red; scutal punctures sparse and irregular with numerous large polished areas ..... *serrulatae* Dunning
- Hindfemora black and yellow; scutal punctures dense and evenly spaced at least over anterior  $\frac{1}{3}$  of scutum ..... *politus* Say



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